AMENDMENT AND RESPONSE UNDER 37 CFR § 1.111 Serial Number: 10/815,185 Filing Date: March 31, 2004

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Title: ELECTRONIC PACKAGING APPARATUS AND METHOD
Assignee: Intel Corporation

REMARKS

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This responds to the Office Action mailed on February 14, 2006. By this response, claims 34 and 37 were amended. No claims were canceled or added. As a result, claims 18-59 remain pending in this application. Applicant requests reconsideration of this application in view of the above amendments and the following remarks. In addition, Applicant requests an early indication of allowance.

§102 Rejection of the Claims

A. Rejection under 35 USC § 102: Claims 34 and 39 were rejected under 35 USC § 102(b) as being anticipated by Horiuchi et al. (U.S. 5,737,191).

B. Response to 35 USC § 102 Rejection: Anticipation requires the disclosure in a single prior art reference of each element of the claim under consideration. In re Dillon 919 F.2d 688, 16 USPQ 2d 1897, 1908 (Fed. Cir. 1990) (en banc), cert. denied, 500 U.S. 904 (1991). It is not enough, however, that the prior art reference discloses all the claimed elements in isolation. Rather, "[a]nticipation requires the presence in a single prior reference disclosure of each and every element of the claimed invention, arranged as in the claim." Lindemann Maschinenfabrik GmbH v. American Hoist & Derrick Co., 730 F.2d 1452, 221 USPQ 481, 485 (Fed. Cir. 1984) (citing Connell v. Sears, Roebuck & Co., 722 F.2d 1542, 220 USPQ 193 (Fed. Cir. 1983)) (emphasis added).

Claim 34 has been amended to recite "...placing a thermally conductive heat spreader over the die, the thermally conductive heat spreader surrounding the die; and interposing a molten metal material between the thermally conductive heat spreader and the die, the molten metal material substantially filling a gap between the die and the thermally conductive heat spreader." The Horiuchi et al. reference does not teach placing a thermally conductive heat spreader over a die to surround the die. The Houriuchi et al. reference fails to teach a this step.

As a result, the Hourichi et al. reference fails to teach each and every element of claim 34 as now amended. Therefore, the Examiner's rejection to claim 34 under 35 USC § 102(b) as being

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anticipated by Horiuchi et al. (U.S. 5,737,191) is now overcome. Applicant respectfully submits that claim 34 is now in allowable form.

Claim 39 depends from claim 34 and now also overcomes the Examiner's rejection under 35 USC § 102(b) as being anticipated by Horiuchi et al. (U.S. 5,737,191).

Allowable Subject Matter

Examiner's Remarks: Claims 35-37 and 40-41 were objected to as being dependent upon a rejected base claim, but were indicated to be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claims 18-33 and 42-59 are allowed.

Response: Claim 37 was amended to include the rejected base claim and is therefore now in allowable form.

Claims 35, 36, 40 and 41 all depend from claim 34. As argued above, claim 34 is now in allowable form after the above amendment. The above amendment overcomes the Examiner's rejection under 35 USC § 102(b) as being anticipated by Horiuchi et al. (U.S. 5,737,191). As a result. Applicant submits that claims 35, 36, 40 and 41 are now in allowable form due to their dependency on now allowable claim 34.

Applicant notes the allowance of claims 18-33 and 42-59 with appreciation.

Conclusion

Applicant respectfully submits that the claims are in condition for allowance and notification to that effect is earnestly requested. The Examiner is invited to telephone Applicant's attorney ((612) 373-6977) to facilitate prosecution of this application.

If necessary, please charge any additional fees or credit overpayment to Deposit Account No. 19-0743.

Respectfully submitted,

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Reg. No. 32,836

CERTIFICATE UNDER 37 CFR 1.8: The undersigned hereby certifies that this correspondence is being filed using the USPTO's electronic filing system EFS-Web, and is addressed to: MS Amendment, Commissioner for Patents, P.O. Box 1450, Alexendria, VA 22313-1450 on this 14th day of June 2006.